BURN YOUR MONEY

**ADULT DEMONSTRATION ONLY**

It's probably not a wise idea to soak money in a flammable liquid and set it on fire, but that's what you'll have to do with this science demonstration.

###### **MATERIALS**

* Rubbing alcohol
* Water
* Tongs
* Lighter
* Cup

###### **EXPERIMENT**

1. Start by talking about how flammable rubbing alcohol is. Taking the mixture of rubbing alcohol and water and pour a bit in a cup. The mixture is 70/30 mixture of rubbing alcohol and water.
2. Dip a dollar bill into the mixture of water and rubbing alcohol, making sure the bill is completely soaked.
3. Remove the bill using the tongs - squeeze out any excess liquid.
4. Move the water-alcohol mixture to a safe place (away from the area where you are going to light the bill).
5. Hold one end of the bill with tongs and light the bottom of the bill. The bill will *look* like it's burning, but it shouldn't burn. When the flame is completely extinguished, it's safe to touch the money... you'll find that the money is even cool to the touch.

###### **HOW DOES IT WORK?**

By now you've probably guessed that the money willactually burn if you dip it into a pure alcohol solution. The secret, of course, is the addition of water to the mixture. The water from the water-alcohol mixture absorbs much of the heat energy that is generated when you ignite the bill. The temperature of the paper money does not rise above the temperature required to burn the paper. The water is first heated to its boiling point and then vaporized by the heat of combustion from the burning alcohol. If you reduce the amount of water in the mixture, the paper money is likely to char or even catch fire.